



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/821,277	03/29/2001	Srinivas Gutta	US 010098	4455
24737	7590	02/15/2005	EXAMINER	
PHILIPS INTELLECTUAL PROPERTY & STANDARDS P.O. BOX 3001 BRIARCLIFF MANOR, NY 10510			AKLILU, KIRUBEL	
			ART UNIT	PAPER NUMBER
			2614	

DATE MAILED: 02/15/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/821,277

Applicant(s)

GUTTA ET AL.

Examiner

Kirubel Aklilu

Art Unit

2614

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 March 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 March 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>3/29/01; 08/23/02</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Specification

The disclosure is objected to because of the following informalities: Page 8 line 8 of the specification states "provide the list of television programs to at least **two** program recommenders, R1, R2 and R3". The examiner believes this to be a minor typographical error to mean "at least **three** program recommenders, R1, R2 and R3"

Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

Claims 1-4, 6-10, 12-14, 16-18, and 20-21 rejected under 35 U.S.C. 102(a) as being anticipated by Vamparys (WO 01/15449).

1. As for **Claim 1**, Vamparys teach a method for recommending television programs, comprising: (see pg. 5 lines 1-3 “a method of profiling that collects explicit and implicit data on users related to programs that can be accessed by users and to provide program recommendations to each user”)

Obtaining a list of one or more television programs (see pg. 5 lines 9-11 “Schedules on program availability and program metadata are broadcast to or received on request by the user terminal . . .”);

Providing said list of programs to at least three different program recommenders, R1, R2 and R3 (see pg. 5 line 23 - pg. 6 line 1 “The recommendation engine works with several different filtering engines such as a content filtering engine and a collaborative filtering engine and treats one user at a time in each filtering engine.” And see fig. 7 units 706 Content Filtering Engine, 708 Collaborative filtering engine, and 710 Filtering engine. Pg. 15 line 19 – pg. 16 line 11 “the recommendation engine 132 activates different filtering engines 706, 708, 710 with that profile. The recommendation engine 132 supports multiple algorithms and can aggregate the result of the different filtering engines 706, 708, and 710 to a single list of programs recommendations”);

Obtaining for each program on said list a set of recommendation scores,

S1, S2 and S3, from each of said recommenders, R1, R2 and R3 (see pg. 16 lines 3-5 “the weighting coefficients 712, 714, and 716 are added to **each respective program recommendation of each filtering engine 706, 708 and 710**”. The output program recommendations of

Art Unit: 2614

each filtering engine are interpreted to be recommendation scores S1, S2, and S3);

Generating for each program on said list a combined recommendation

score, C, computed by applying a voting process (see pg. 16 lines

2-11 "In a third substep 720, the user profile in the user profile

database 130 is updated. In order to accomplish this, the weighing

coefficients 712, 714, and 716 are added to each respective

program recommendation of each filtering engine 706, 708, and

710. Coefficients 712, 714, and 716 differ depending on the

filtering engine 706, 708 or 710 to which they apply and also

depending on the program content category because a filtering

engine can be better adapted to one content category than another

content category." The process of adding the weighing coefficients

(that depend on the filtering engine) in order to create a single

recommendation score is interpreted as applying a "voting process"

because the output of each filtering engine is assigned a different

"vote" as a result of the different weighting coefficients) to each said

recommendation scores S1, S2 and S3 (see pg. 15 line 24 – pg. 16

line 5 "The recommendation engine 132 supports multiple

algorithms and can aggregate the result of the different filtering

engines 706, 708, and 710 to a single list of program

recommendations."); and

Recommending the program to a user by presenting said combined recommendation score, C, to said user (see pg. 8 lines 22-24 "from the collected data, the server 126 builds and delivers program recommendations to each user 116").

2. As for **Claim 2**, Vamparys teaches said recommendation scores S1, S2 and S3 are implicit recommendation scores I1, I2 and I3 for said one or more programs (see fig. 7 unit 130 Users Profile Database, pg. 11 lines 3-15 "User profiles are built on explicit and implicit data 134, 136 collected by profile server 126 . . Implicit data 134 is data that is monitored by the terminal 108 and sent to the profiling server 126. This data 134 is also stored in the user's profile database 130." and Pg. 13 lines 8-10 "to use implicit data 134, the recommendation engine 132 does not only need to know zapping information but . . .". When the recommendation engine 132 (and subsequently the different filtering engines 712-716) are using implicit data as described above, the recommendation scores that the filtering engines will output will be implicit recommendation scores, I1, I2, and I3.
3. As for **Claim 3**, Vamparys teaches said voting process is based on a stochastic method (see pg. 16 lines 12-23 "The coefficients 712, 714, and 716 can be tuned manually. They can also evolve dynamically by using feedback adaptive

algorithm well adapted to heuristic algorithms.” It is well known in the art that a heuristic algorithm is a stochastic method.).

4. As for **Claim 4**, The USPTO considers the “or” language recited in a number of the Applicant’s claims to be anticipated by any reference that teaches at least one of the recited limitations. Vamparys teaches said stochastic method comprises a memory based learning process (see Vamparys pg. 16 lines 5-11 “Coefficients 712, 714, and 716 differ depending on the filtering engine 706, 708, 710 to which they apply and also depending on the program content category because a filtering engine can be better adapted to one content category than another category. For example, the collaborative filtering engine 708 gives better results with the movie category than with the sport content category.” Because for example a collaborative engine gives better result with the movie category, clearly a memory based learning process is employed because there has to be a memory to keep track of what filtering engine gives better results with what kind of program category). Vamparys also teaches a rule based learning process (see Vamparys pg. 16 lines 5-11 “Coefficients 712, 714, and 716 differ depending on the filtering engine 706, 708, 710 to which they apply”. Clearly a rule based learning process is employed in order to define a rule that determines what coefficients apply to what filtering engine.)

5. As for **Claim 6**, Vamparys teaches said combined recommendation score, C, (see pg. 15 line 23- pg. 16 line 2 “The recommendation engine 132 supports multiple algorithms and can aggregate the result of the different filtering engines 706, 708 and 710 to a single list of program recommendations.”) enables the user to select a television program of interest (see pg. 15 line 13-15 “In this mode, the profiling server 126 brings instant gratification of the user by giving him program recommendations related to the new rating he has sent to the profiling server 126”).
6. As for **Claim 7**, Vamparys teaches the method of claim 2, further comprising generating at least an explicit recommendation score, E, (see pg. 12 lines 4-21 “a sub-method 300 is described that acquires explicit data 136 by collecting the user’s tastes by means of a rating process. . . . the profiling server 126 can activate the recommendation engine 132 and immediately returns program recommendations 204 generated from the new rating”) for said one or more television programs; and generating a combined recommendation score, Ce, computed by applying a voting process to each of said implicit recommendation scores and said explicit recommendation score, E (see pg. 15 line 23- pg. 16 line 2 “The recommendation engine 132 supports multiple algorithms and can aggregate the result of the different filtering engines 706, 708 and 710 to a single list of program recommendations.”).

7. As for **Claim 8**, Vamparys teaches the method of claim 7, further comprising generating at least a feedback score F , (see pg. 12 lines 9-12 “the user can select a field 214 of a displayed program 200, assign a grade 206 for that field 214 and validate this rating using a validate button such as that on a remote control or touch screen”) for said one or more television programs; and generating a combined recommendation score, C_f , computed by applying a voting process to each of said implicit recommendation scores, said explicit recommendation score and said feedback score (see pg. 15 line 23- pg. 16 line 2 “The recommendation engine 132 supports multiple algorithms and can aggregate the result of the different filtering engines 706, 708 and 710 to a single list of program recommendations.”).
8. As for **Claim 9**, Vamparys teaches said voting process is based on a stochastic method (see pg. 16 lines 12-23 “The coefficients 712, 714, and 716 can be tuned manually. They can also evolve dynamically by using feedback adaptive algorithm well adapted to heuristic algorithms.” It is well known in the art that a heuristic algorithm is a stochastic method.).
9. As for **Claim 10**, Claim 10 is analyzed with respect to Claim 4 and is rejected accordingly.

10. As for **Claim 12**, Vamparys teaches a method for recommending television programs, comprising:

Obtaining a list of one or more television programs (see pg. 5 lines 9-11 "Schedules on program availability and program metadata are broadcast to or received on request by the user terminal . . .");

Obtaining at least an explicit recommendation score, E, for said one or more television programs (see pg. 12 lines 4-21 "a sub-method 300 is described that acquires explicit data 136 by collecting the user's tastes by means of a rating process. . . . the profiling server 126 can activate the recommendation engine 132 and immediately returns program recommendations 204 generated from the new rating");

Obtaining at least an implicit recommendation score, I, for said one or more television programs (see fig. 7 unit 130 Users Profile Database, pg. 11 lines 3-15 "User profiles are built on explicit and implicit data 134, 136 collected by profile server 126 . . Implicit data 134 is data that is monitored by the terminal 108 and sent to the profiling server 126. This data 134 is also stored in the user's profile database 130." and Pg. 13 lines 8-10 "to use implicit data 134, the recommendation engine 132 does not only need to know zapping information but . . .");

Obtaining at least a feedback recommendation score, F, for said one or more television programs (see pg. 12 lines 9-12 "the user can select a field 214 of a displayed program 200, assign a grade 206 for that field 214 and validate

Art Unit: 2614

this rating using a validate button such as that on a remote control or touch screen”);

Generating for each television program a combined recommendation score, C, based on applying a voting process to each said explicit recommendation score, said implicit recommendation score and said feedback recommendation score (see pg. 15 line 23- pg. 16 line 2 “The recommendation engine 132 supports multiple algorithms and can aggregate the result of the different filtering engines 706, 708 and 710 to a single list of program recommendations.”);

and

Recommending said combined recommendation score, C, to a user by presenting said combined recommendation score, C, to said user (see pg. 8 lines 22-24 “from the collected data, the server 126 builds and delivers program recommendations to each user 116”).

11. As for **Claim 13**, Vamparys teaches said voting process is based on a stochastic process (see pg. 16 lines 12-23 “The coefficients 712, 714, and 716 can be tuned manually. They can also evolve dynamically by using feedback adaptive algorithm well adapted to heuristic algorithms.” It is well known in the art that a heuristic algorithm is a stochastic method).

12. As for **Claim 14**, Claim 14 is analyzed with respect to Claim 4 and is rejected accordingly.

13. As for **Claim 16**, Vamparys teaches said combined recommendation score, C, (see pg. 15 line 23- pg. 16 line 2 "The recommendation engine 132 supports multiple algorithms and can aggregate the result of the different filtering engines 706, 708 and 710 to a single list of program recommendations.") enables said user to select a television program of interest (see pg. 15 line 13-15 "In this mode, the profiling server 126 brings instant gratification of the user by giving him program recommendations related to the new rating he has sent to the profiling server 126").

14. As for **Claim 17**, the limitations in Claim 17 can be found in Claim 1. Claim 17 is analyzed and rejected as previously discussed with respect to Claim 1:

Claim 17 further requires: a memory for storing computer readable code (see fig. 1 unit 126 Profiling Server, pg. 8 lines 19-22 "The profiling server 126 collects information on programs metadata 104 and on user profiles and stores these data in the program metadata database 128 and in the users profile database 130"); and

a processor operatively coupled to said memory (see fig. 1 unit 132 Recommendation Engine).

15. As for **Claim 18**, Claim 18 is analyzed with respect to Claim 4 and is rejected accordingly.

16. As for **Claim 20**, the limitation for Claim 20 can be found in Claim 12. Claim 20 is analyzed and rejected as previously discussed with respect to Claim 12. Claim 20 further requires:

a memory for storing computer readable code (see fig. 1 unit 126 Profiling Server, pg. 8 lines 19-22 "The profiling server 126 collects information on programs metadata 104 and on user profiles and stores these data in the program metadata database 128 and in the users profile database 130"); and

a processor operatively coupled to said memory (see fig. 1 unit 132 Recommendation Engine).

21. As for **Claim 21**, Claim 21 is analyzed with respect to Claim 4 and is rejected accordingly.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

Art Unit: 2614

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 5, 11, 15, 19, and 22 rejected under 35 U.S.C. 103(a) as being unpatentable over Vamparys (WO 01/15449).

17. As for **Claims 5, 11, 15, 19 and 22**, the Vamparys teaching does not expressly teach said stochastic methods are combined according to a combination scheme comprising a unison scheme, a majority scheme, a trust scheme, an averaging scheme or mixtures thereof. The Vamparys teaching does however teach the stochastic method comprises a memory based learning process and a rule based learning process (as shown in Claim 4's rejection above). When the coefficients are added to each respective program recommendation of each filtering engine (see pg. 16 lines 4-5 "the weighting coefficients 712, 714, and 716 are added to each respective program recommendation of each filtering engine 7016, 708 and 710), clearly a rule based learning process in combination with a memory based learning process is employed because of the fact that certain filtering engines give better results with a certain content category (this is clearly based on memory of past events that have confirmed that certain coefficients give better results with certain program categories), the appropriate coefficients are used with each respective filtering engine (a rule based learning process).

However, **Official Notice** (MPEP § 2144.03) is taken that both the concepts and advantages of using a combination scheme comprising an averaging scheme is well known and expected in the art. At the time the invention was made, it would have been obvious to one with ordinary skill in the art to have used a combination scheme such as an averaging scheme in the Vamparys teaching in order to combine the memory based learning stochastic process and the rule based learning stochastic process. An averaging scheme can be used in order to average the result of the memory based learning process with the result of the rule based learning process to provide a combined result. One would have been motivated to use the combination schemes mentioned above in order for the recommendation engine to choose more appropriate coefficient factors which will result in a more accurate television program recommendation.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kirubel Aklilu whose telephone number is 703-305-8144 (571-272-7342 after 3/2/2005). The examiner can normally be reached on 9:00AM - 5:30PM.


Art Unit: 2614

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Miller can be reached on 703-305-4795 (571-272-7353 after 3/2/2005). The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

KA

2/1/05


JOHN MILLER
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600